

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Richard Fisher <ki6sn@pe.net>
Subject: [2974] "TFR Challenge" Deadline Approaches
Message-ID: <Pine.GS0.3.95.961027173134.28053B-100000@victoria>

We're only a few days away from the deadline for the Adventure Radio Society's "TFR Challenge," in search of innovative designs for "trail friendly" radios.

Friday, Nov. 1, marks the closing of the design period, and the proper filing information should be in the mail for ARS review. As a reminder, following are the requesites for submitting a design in the challenge:

- A written description of the radio -- including details of its physical design, operating characteristics and the challenger's philosophy of development -- must be submitted by TFR Challenge participants to ARS for review, dissemination and posting on ARS site on the worldwide web.
- A photograph of the finished product must be submitted for review, dissemination and posting on ARS' site on the worldwide web.
- A photograph of the operator using the finished product on the trail must be submitted for review, dissemination and posting on ARS site on the worldwide web.
- Written descriptions should be submitted via U.S. Postal Service or e-mail (KI6SN@aol.com).
- Photographs (and descriptions for those without e-mail) should be mailed to: Richard Fisher, KI6SN, 1940 Wetherly St., Riverside, CA 92506. Color prints, slides, or black and white prints are all acceptable.
- Deadline for descriptions and photographs is Nov. 1, 1996. Given the vagaries of the mail, the filing period will remain open through Nov. 15, to assure that challengers' packets have ample time to arrive.

Every radio amateur taking the society's challenge and meeting its criteria will be awarded a "TFR Challenge" certificate.

Special certificates will be awarded to amateurs -- both ARS members and non-members -- whose designs are found to be particularly innovative after review by ARS founders Russ Carpenter, AA7QU, and Wayne Burdick, N6KR. ARS member Mike Herr, WA6ARA, will also participate in the review process.

Every ARS member who takes the "TFR Challenge" will be eligible for several items to be given away in random drawings:

- An Oak Hills Research "Explorer II" 40-meter QRP transceiver kit
- A QRP Club of New England "NE 30-40" 30-meter transceiver kit
- A Wilderness Radio "KC-1" displayless frequency counter and memory keyer kit
- Two Radio Shack audio "Power Amplifier Module" kits

Vy 72,

Richard Fisher, KI6SN
ARS No. 3

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Ed Tanton N4XY <n4xy@avana.net>
Subject: [2959] Almost Free Signal Generators
Message-ID: <3273A0C6.E23@avana.net>

Hi all... I have three HP608D signal generators (1-475MHz) I have had too long and do not need. I would like to see them go to good homes-so to speak. I cannot ship them. Two came from a certain local airline's instrument shop, were removed from service, and look pretty good. The third was military, and looks OK (needs cleaning.) I would like \$50 for the first two (I'm losing money on these) and \$35 for the third. I will GIVE them (only one to a customer) to a student/novice/whoever if said person will promise to USE them-as opposed to resale or anchoring their speedboat at Lake Lanier. These are great signal generators, with calibrated rf output, and modulation. I have manual(s) available-for-copy. I really HATE to see good instruments go to waste. As I said, pick up ONLY.

--

72/73

Ed Tanton N4XY EMAIL: n4xy@avana.net TEL: (770)579-3933
Voice/MBX/FAX
189 Pioneer Trail, Marietta, GA 30068-3466

QRP-ARCI#7663 G-QRP#6779 OK-QRP#172 QRP-L#758 AdvRC#140 NORCAL#1779
NCDXF SEDXC
Life Member: ARRL AMSAT IDRA INDEXA QCWA URL:
Coming Soon

"Think you can, think you can't: either way you're right!" Henry Ford

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: kb0rol@juno.com (Bradley L Mugleston)
Subject: [2980] Antenna Cutting
Message-ID: <19961027.193746.7695.0.kb0rol@juno.com>

Gang,

I have an Autek RF-1 and am using it to build a new Delta Loop - the old one made it through all last winters snow storms so now that its winter again I thought I should put it up higher and use better wire.

Anyway , the instructions with the RF-1 walk you through measuring the antenna and calculating the amount you should cut off or add to the antenna you have. All of the instructions use the lowest SWR as the measurement BUT they recommend you look for the extreme Z (impedance) as its more accurate than using SWR (2:1 SWR could be 25Z or 100Z).

The formula is $\text{Desired Length} = \text{Actual length} \times \text{Actual Frequency} / \text{Desired Freq.}$

Now for the question - The lowest SWR I get is 1.9:1 reading which is also at my desired Freq. (7.000 MHz) the Z is 33. This is also the lowest Z reading. Why isn't the Z = 50 and the SWR closer to 1.1 if this is my closest match to my antenna? I can find a Z of 50 and a SWR of 1.9 at 7.100 MHz again with Z = 50 why isn't SWR 1:1.

So in the above formula my desired length is my actual length. How do I fix the SWR to be lower? The first antenna I built was the classic 1/4 wave vertical for 2M using an vertical soldered to a SO-239 with 4 radials. You cut the vertical to 19 5/16 inches to be 1/4 electrical wave, to get the signal out and bent the radials down to get a 50 ohm impedance. So on my Delta Loop what do I bend 8-(.

I hope this makes some sense. It seems the more I learn the more I get confused (Is this the classic don't confuse me with the facts syndrome?).

Thanks for any help you can give.

de

Brad Mugleston - KB0ROL
Colorado QRP Club # 170, QRP-L #316, ARRL
QTH - Aurora, CO - DM79oq
KB0ROL@JUNO.COM
BMUG@GWL.COM

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "William R. Colbert" <v31xe@dzn.com>
Subject: [2950] Antenna supports in trees
Message-ID: <3273A9B6.2FCB@dzn.com>

Hello claton, and gang. What I used to do many years ago when I lived in S. Georgia, which has nice 90-100 ft pine trees, was to bring the rope over a high branch with enough slack to reach the ground, plus enough to drop the antenna down for maintenance. To keep the antenna up between the swaying trees, I went to the hardware store and purchased two screen door springs (like those that once were used on the wooden screen doors) inserted between the insulator and the tree. This allows for the swaying of the trees with the antenna staying taught, and riding high in the wind and not breaking. If more spring is needed, one can be used on each end of the antenna. The small diameter 14-16 inch spring is sufficient for a single wire dipole/window type and a larger diameter or paralleled springs may be needed for trap type antennas. Hope this is close to answering your question.

--

72/73, Ray Colbert, W5XE, SOWP 1064M
(also af852@rgfn.epcc.edu)
El Paso, Texas

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Mel Evans <101366.3072@CompuServe.COM>
Subject: [2955] Bandwidth-or how to half it!
Message-ID: <961027175603_101366.3072_JHP91-2@CompuServe.COM>

Hi gang,

Been away RV'ing for the last autumn weekend in the depths of Western Scotland. Decided to set qrp-l to the digest.

Wonderful, only eight messages in the mailbox instead of 189. Read them all. About 123 of them contained quotes in part or IN FULL!!! of previous postings.

OK, don't believe me, set YOUR mailbox up on digest and you'll find out just how much of the bandwidth is used up in this kind of pointless exercise. If the guy you are replying to has forgotten what he wrote, it probably wasn't that important to him anyway, if the rest of us are interested, we can look up the original message easy enough.

Why am I rattling the bars again on this? Well, it comes as a fair old shock if you subscribe to the digest and then SEE one after the other just how many

people seem to do this on the same subject.

Is it too easy to put something in <quotes> verbatim, I ask myself?

Standing by with FIRE blanket . . .

72 and 73 de Mel
GM6JAG
Edinburgh, Scotland UK
Home of the last HW9

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: launerb@crl.com (William H. Launer)
Subject: [2947] Call CQ if band is "dead"!
Message-ID: <v01530500ae992dd0930a@[192.0.2.1]>

Gang,

Last evening I monitored 3560 for quite a while, and heard nothing but qrn. I called "cq", and heard N4FNG in Clearwater, FL, calling me. He was weak (about a 229), but we managed to make a qso, nevertheless. We were both running 5 watts. He was running an Argonaut and a vertical. I was using my SP-600/SB-401 combination, with a 66 ft. end-fed wire playing against a ground rod/ 66 ft. counterpoise combo.

The moral of the story: if you don't hear any qrp'rs on an otherwise active band, call "cq". If we all listen, we won't make any contacts!

72/73, Bill wb0cld

Bill Launer
St. Charles, MO
launerb@crl.com
wb0cld@wb0cld.ampr.org [44.46.66.25]
qrp-l #279 qrp arco #3551
Grid Square EM48RT

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Ed Tanton N4XY <n4xy@avana.net>
Subject: [2957] DSP for sale
Message-ID: <32739E55.372B@avana.net>

Hi all... I have just installed my NIR-12 and wish to sell my Timewave DSP59+ in perfect condition. I am interested in an HW-9, but probably not other trades (OK... a Ten Tec PM# would be interesting.) Price is \$175.00 delivered CONUS. Thanks.

--

72/73

Ed Tanton N4XY EMAIL: n4xy@avana.net TEL: (770)579-3933
Voice/MBX/FAX
189 Pioneer Trail, Marietta, GA 30068-3466

QRP-ARCI#7663 G-QRP#6779 OK-QRP#172 QRP-L#758 AdvRC#140 NORCAL#1779
NCDXF SEDXC
Life Member: ARRL AMSAT IDRA INDEXA QCWA URL:
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"Think you can, think you can't: either way you're right!" Henry Ford

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
Subject: [2949] Effects of solder flux on circuit
Message-ID: <32738d42.pandora@pandora.lugs.org.sg>

Hi Gang,

I was wondering if anyone has any thoughts about what kind of effect solder flux has on a circuit, RF especially. I have noticed that some people emphasize cleaning the flux off the boards which is something I have never really done. I wonder if the flux itself has resistive or capacitative effects at HF that we should be aware of? Thanks.

73 de 9V1ZV Daniel

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*-----+-----+
| Daniel Wee | daniel@pandora.lugs.org.sg |
| 9V1ZV      | danwee@singnet.com.sg      |
| QRP-L #667 | daniel.wee@f516.n600.z6.fidonet.org |
+-----+-----+
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From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: majewski@erim.org (Ron Majewski)
Subject: [2985] FOX announcement

Message-ID: <9610280312.AA24691@spsd630a.erim.org>

Hello to all,

It's my turn to be the FOX and I am anxious to see how many of you hounds can flush me from the brambles and grab my QRP-L number.

I have been tweaking up my antennas for the last two weeks in anticipation of the hunt. I will be bouncing between a quarter-wave ground plane with 8 radials up 15 feet and a full wave delta loop at 56ft.

If you're curious, you can see some photos of my antenna farm at the following URL:

[<ftp://ftp.erim.org/outgoing/majewski/tour/tour.html>](ftp://ftp.erim.org/outgoing/majewski/tour/tour.html)

Since the FCC has not yet run Gate 2 day one, my callsign remains WB8RUQ.

I will be active from 0100-0300utc on 29 October. That's 8pm - 10pm EST local time on Monday 28 October.

Let's hope for good propagation. I'm looking forward to working you all!

72/3,

Ron (wb8ruq).
majewski@erim.org

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "Seabury Lyon, AA1MY" <SSLYON@postoffice.worldnet.att.net>
Subject: [2979] Fox Antenna/alternatives
Message-ID: <19961028021056.AAA19687@LOCALNAME>

> So, the questions for the group are: a. Has anyone tried this at 7
> mhz? b. Is it worth trying at less than optimum length? c. Should I sell
> my radios and take up underwater basket weaving before it's too late?

>

>TNX and 73, Ken

>*****

Take up emersion weaving if you must Ken, but don't give up radio yet.
In your case I'd forget the "Mini-Bev" as a nice thought, BUT....
Rather, I'd invest the time and trouble in as Big a LOOP as possible,
or, as long a dipole or Zepp as possible, -assuming you have height
and supports available. If only one support w/height, a VEE-SLOPER is
the next best. (terminated, for multi-band use) Note that in any case,

the Beveridge is not a transmitting antenna. It's advantage is ONLY in receiving w/low noise. The Antenna Handbook is really good ref. for this. Good luck! =s=
Seabury "Seab" Lyon AA1MY
44 Codfish Hill Road
Bethel, CT, 06801, USA

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "Ken Freedman" <n1qqv@cshore.com>
Subject: [2967] Fox Antenna??
Message-ID: <199610272224.RAA160101@nss2.CC.Lehigh.EDU>

I think this is becoming an obsession, but, here goes:

In researching antennas (antennae?) that might improve my odds of hearing a Fox, I came across the Two Wire Beverage in the League antenna manual. (Mine is dated 1993.) While a 3db LOSS is claimed for this style antenna, the ability to switch phases and a steerable null zone are claimed to more than make up for this little problem. The antenna is said to be most effective at 160 meters and "good results" have been reported up to 10 mhz. A ham in my neighborhood uses a pair of single wire Beverages on 75 meter SSB, and can in fact, work stations when I can only tell that someones there in the noise.

In a wrestling match with my calculator I came up with an optimum length of @237 feet. I can actually do about 140 feet and still be on my own property.

So, the questions for the group are: a. Has anyone tried this at 7 mhz? b. Is it worth trying at less than optimum length? c. Should I sell my radios and take up underwater basket weaving before it's too late?

TNX and 73, Ken

Ken Freedman
AKA: N1QQV/QRP

VE, EC Madison CT

Living Proof That, "You don't have to be a blonde to be light headed!"

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: John Dorson K2JHU Real Estate Consultant <jdorson@bbs.mpcs.com>

Subject: [2962] fs/trade backpacker II
Message-ID: <199610272124.QAA00613@bbs.mpcs.com>

I have a backpacker II for 30 meters and has a the optional
keyer installed. works great and looks as good, but need to
get a very small 40 meter rig to take to the beach when i
go, since there is more 40 meter activity during these times...

asking \$115.00 including shipping in US or will trade for a
40 meter rig (small like nor-cal 40a).

if interested, please e-mail me direct
Thank You

John Dorson Real Estate Consultant in Brevard County Florida
E-Mail To: jdorson@bbs.mpcs.com

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| Trying for WAS -      AL,AK,AZ,AR,CA,CO,CT,FL,GA,IL,IA,KS,KY,LA,ME,MD,MA|  
| and worked these:    MI,MN,MT,NH,NJ,NY,NC,ND,OH,OK,OR,PA,RI,TX,VT,VA,WA|  
|                     WI                                           |  
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K2JHU only QRP... CQC #351, GQRP # 9092, QRP-L #672

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Ed Tanton N4XY <n4xy@avana.net>
Subject: [2956] GAP DX Voyager counterpoise info needed
Message-ID: <32739D49.7DD0@avana.net>

Hi all... I cannot find the book on my GAP DX Voyager antenna to look up
the rad...oops I mean counterpoise lengths. Could someone pass those
numbers along? I need to replace mine after construction near the
antenna wiped several out. Thanks.

--

72/73

Ed Tanton N4XY EMAIL: n4xy@avana.net TEL: (770)579-3933
Voice/MBX/FAX
189 Pioneer Trail, Marietta, GA 30068-3466

QRP-ARCI#7663 G-QRP#6779 OK-QRP#172 QRP-L#758 AdvRC#140 NORCAL#1779
NCDXF SEDXC
Life Member: ARRL AMSAT IDRA INDEXA QCWA URL:
Coming Soon

"Think you can, think you can't: either way you're right!" Henry Ford

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: nskousen@scientechnology.com (Niel Skousen)
Subject: [2961] HB: Re: VXOs
Message-ID: <199610271933.MAA04199@eaglerock.if.scientechnology.com>

Another approach might be the use of the Mot. MC13176 (a single chip PLL w/ fixed N=32) with a VXO reference. This could yeild stable frequency coverage greater than 150khz...

On paper, have not tried it yet....

GL

Niel

>>From time to time VXO techniques have been discussed by this group. So I
>thought I'd pass along some interesting experimental results of W4LQE,
>Bob, who lives in this area, is a member of QRP ARCI, but who is not on
>e-mail.

>

>He has been experimenting with 24-25 MHz fundamental (NOT overtone) xtals
>and achieved up to 40 kHz stable swings. He uses the same basic
>techniques as with lower frequency VXOs (both L and C in the swing line),
>but so far with surplus/flea market/etc. xtals has had to adjust the L
>values for each xtal. He has also doubled the xtal frequency to the 48-40
>MHz range for 80 kHz stable range, and then mixed the frequency with 602s
>down to the ham band of interest. Mixing products, of course, become a
>nonproblem.

>

>Makes me wonder what results might be obtained with unit-to-unit reliable
>xtals. With 80 kHz, rather than the 40 kHz typical of varacter 2 MHz
>VFOs, more band might be available, and IF everything remained stable with
>tripling and mixing downward, both the general and novice QRP frequencies
>would be accessible on 40. Bob reports the VXOs fit on postage stamp
>boards using "ugly" construction, so size increase using his system seems
>minimal.

>

>I have asked Bob to write up his results so far and send them to QQ, to
>which he subscribes. In the meantime, I thought I'd pass along these
>quick notes, especially for the VXO experimenters. Remember that
>something may well have been lost or distorted in my translation of our 10
>meter conversation last Thursday, but most VXO experimenters can likely
>set things right.

>

>-73-

>

>LB, W4RNL

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: kd7s@psnw.com (Bill Jones)
Subject: [2948] Help: Temp Controlled Soldering Iron
Message-ID: <199610271604.IAA00535@sierra.psnw.com>

Ladies and Gentlemen,

With all this talk about soldering irons, I wonder if someone could lend a hand with a problem I have. A couple years ago my wife bought me a GC Electronics "Supertemp" soldering station model 12-070. It was a Christmas gift and she purchased it well in advance. I tried it out soon after Christmas day but it didn't work. The temperature meter went full scale and stayed there, but the iron remained cold. When I took it back to the dealer they wouldn't exchange it because it was "beyond their warranty exchange period." I was so disgusted that I put it in a box and all but forgot it. Does anyone has a schematic for this puppy? I'm confident I could troubleshoot and repair the iron if I knew what I was looking at. I suppose I could "reverse-engineer" the circuit but that doesn't help much with the house-numbered active devices.

=====
Bill Jones - KD7S <><
Sanger, California
Reply to kd7s@psnw.com
=====

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "Vernon A. Hatley" <vhatley@worldnet.att.net>
Subject: [2968] Kenwood reflector?
Message-ID: <19961027235200.AAA1995@LOCALNAME>

I know there is a Ten Tec & Yaesu reflector; does anyone know if there is a Kenwood reflector? Thanks.

--

KK5RO
Shawnee, OK

Vernon A. Hatley
QRP-L #325

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "Phil, AC6LS" <ac6ls@amsat.org>
Subject: [2978] need cross ref. of diode.....
Message-ID: <327407AD.6076@amsat.org>

Trying to put together some stuff here from scratch per someone
elses schematics. Calls for a Motorola HPA-2800 hot carrier diode
or equiv. Cant find any ref. to this part in any of the catalogs
I have. I know someone has the answer (specs or cross ref).

Thanks, 72 de Phil

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
Subject: [2951] Output Power, what else determines?
Message-ID: <327399a1.pandora@pandora.lugs.org.sg>

Hi,

In continuation of my experiments with amplifiers, I am now investigating
a typical Class C finals driven by the circuit we have discussed earlier. In
the course of my testing, I have tried various different final transistors
to see what their effects are, etc. Some of the notes I have made so far:-

1. A suitable capacitor from the collector to ground can help clean up and
otherwise very distorted waveform and have very little impact on output
power. This was recommended by Lewallen W7EL in his Oct 78, QST article.
I had observed a very "spiky" waveform which this capacitor cleaned up
substantially and restored a more or less sinusoidal waveform. This was
measured at the collector. I have not set up my spectrum analyzer but I
am guessing that this means less unwanted harmonics in the final output
which is a Good Thing (tm). The theory of it is described in the article
which is also reprinted in the QRP Classics on page 262.
2. When properly driven, the output of the Class C will begin to clip and
once that happens, the harmonics will increase. When clipping occurs,
there should be only marginal power increase but I think the power meter
will show a more significant power increase though this power will not
be at the fundamental frequency. A good output filter will make this
less apparent but at the present moment I am not sure how accurate these
observations are. What is the best wave form to have at the Class C
output? I am thinking that I should get the maximum swing without
clipping. Is this right? I notice that when clipping occurs, the voltage
swing actually increases somewhat. Any comments?

3. I also tried various final transistors to evaluate their performance within the same circuit. In particular I tried the MRF476, 2SC1678, 2SC1969 and 2SC1971. The 2SC1678 is designated as a replacement for the MRF476, the 2SC1969 for MRF475 and the 2SC1971 for the MRF260. Without change in drive power and output load, the 2SC1969 had the worst output, probably due to its substantially lower gain. Output could not be driven to clipping range. The MRF476 was respectable but the 2SC1678 was a much better device. I would recommend this as a good substitute for the MRF476 and over here it is also much cheaper. The 2SC1971 is a more expensive device and the pinout configuration is a little different but it manages to give out a little more power than the 2SC1678, probably due to its higher gain. I was not able to get too much more power by merely substituting in a transistor with a higher gain, expectedly.
4. In trying to get more power out of the finals, I also tried different matching transformers. The original output used a 1:4 transmission line transformer. The output filter is a non-conventional one. Given that the circuit was designed to output 4W max, and that output load is given by:-

$$Z_{out} = (V_{cc} * V_{cc}) / (2 * P_{out(max)})$$

$$= 12 * 12 / (2 * 4) = 18 \text{ ohms}$$

Therefore, the filter input would be somewhere around $4 * 18 \text{ ohm}$ after the 1:4 transformation, or 72 ohms. With this in mind I tried to reduce the output impedance (and hopefully the output power) by 2 methods:-

- a) I changed the values of the output filter (5-element) to become a 50 ohms input instead of a 72 ohms input one. I figured this would translate into a 12.5 ohms load at the collector instead of the 18 ohms and therefore I will see more power output. Nope. In fact I saw less power output. Why? I don't know yet. Comments?
- b) I tried using a 1:9 transmission line transformer (for which I solicited advice here but haven't received replies yet). I used the winding diagram in the 1994 ARRL Handbook and am not sure if I got it right because it has some confusing notes there. Anyway, plugging in the new transformer resulted in lower output power, again! This should not be the case since if I got the transformer right, the collector should be seeing some 8 ohms load ($72 / 9$). Messing around with the way I connected the transformer managed to get me some power out though .. in fact a little bit more than the 1:4 transformer. I am a little confused as to the way this should be connected.
- c) I tried regular transformers with different ratios but so far the best output seems to be the 1:9 transmission line transformer

connected in the "wrong" way. (It may be correct but I need to study it more before I know.)

So, after all this I still don't know how to substantially increase the output power of the finals. I have enough drive on the transistor to drive it into clipping with the 1:4 transformer. At the present I know the the 1:9 transformer has some chance of increasing the output power but it was marginal. I have tried different transistors. I am going to do more experiments but right now I am basically up against the wall. I have tried to broach this subject for a long time but there just does not seem to be enough clear (to me) information for me to effectively modify a circuit to put out the amount of power I choose. The output filter is another story by itself. I have tried to determine what kind of filter it is and have even asked here but I ran into a dead-end there again. Sheesh... I need a rest! :-)

So, I am open for comments and advice from the experts. The student has done his homework and came up dry. What gives? Can someone with the expertise walk us through a design example step by step? I'd like to see how we can design a circuit for pre-specified parameters, for example:-

Input power	1 mW
Output power	5 W
Stages	2
Frequency	14 MHz
Vcc	12 V

1. Gain distribution

For example (this is just an EXAMPLE). For a 5W output power and 1mW input, we're talking a total gain of 38dB (approx) gain. Choosing the MRF476 as the finals will afford us about 25dB gain at 14MHz. This leaves us with about 13dB from the driver.

2. Driver design

We use a Class A driver stage with a bypassed emitter to reduce filtering components and a cleaner output. Since we are using bypassed emitter, then stage gain is determined in part by transistor's Beta AC. 13dB gain on the 1mW input means this stage has to deliver 20mW output. Etc. etc.

3. Finals design

Using Class C the design is pretty straight forward. The primary concern is the output load required. A 14.4 ohms collector is required to

realize this and a 1:4 transformer translates this to 56 ohms for the filter. Etc. etc.

4. Filter design

Etc. etc.

In the above example I have picked some really easy values (since I haven't figured out quite a bit of it yet). But if we could have someone come up with a step by step tutorial for homebrewing or customizing a transmission strip amplifier design, showing us what are the important factors to take into account, this would prove invaluable. Any takers? I especially want to learn about other design criteria that will help me understand why some amps are designed in a certain way in preference over other designs etc. I know all this should be in a book somewhere but since this has started, I'd like to see it finish here too. Honest! I've tried my best to work out as much as I can on my own. The quantity of my questions display my ignorance, I know, but I don't want to stay ignorant! :-) Thanks.

73 de 9V1ZV Daniel

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*-----+-----+
| Daniel Wee | daniel@pandora.lugs.org.sg      |
| 9V1ZV      | danwee@singnet.com.sg             |
| QRP-L #667 | daniel.wee@f516.n600.z6.fidonet.org |
+-----+-----+
```

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996

From: w0rw@kktv.com

Subject: [2946] Personal Engineering

Message-ID: <TCPSMTP.16.10.27.9.28.26.2240783031.2365310@kktv.com>

Check the October 96 issue of "Personal Engineering & Instrumentation News" for a great editorial by Paul Schreier AA1MI (eMail pgsperseng@aol.com or <http://www.pein.com>)

which includes his experience with QRP. He also wrote an article on p43 about

computer control of an FT-990.

72 de w0rw

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996

From: "Thomas J. Whalen" <whalen@swcp.com>
Subject: [2966] PM3
Message-ID: <Pine.SUN.3.91.961027145405.27995A-100000@kitsune.swcp.com>

Can anyone tell me what a fair price is for a Ten Tec PM-3. I have a friend that has one and neither one of us know what it's worth. Thanks
Tom WB5QYT qrp-l 640

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "Dean Marzocca" <n2tnn@ifu.net>
Subject: [2983] QRP logger solved
Message-ID: <199610280250.VAA23224@mail.ifu.net>

Just a note to thank everyone who commented on the printing problem here with the logger. I ended up attaching a copy of the log file to a e-mail message and it was printed out on the other end by a full functioning QRPpal.

Thanks again and the log will be in the mail to Cam for his inspection. Great contest!!!

72/73, Dean, NJ, N2TNN, QRP-L # 560
EMPS Q=4 S=3 DX=1

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Luke Enriquez <ecsclfe@lux.latrobe.edu.au>
Subject: [2975] QRP Rigs - Not found at HamVentions...
Message-ID: <9610280141.AA14130@lux.latrobe.edu.au>

Howdy,

I managed to make it to the Ballerat Ham-vention on Sunday. I did not see one QRP rig for sale. There was quite a bit of QRO HF gear, and <30W all mode VHF-UHF stuff, but no QRP. If discussions with Adrian (VK3KMU) work out, the next Ham-vention we will set up a table to have some of this equipment on display.

Australians don't have much of a local choice of QRP rigs to buy or build because most designs are crystal locked direct conversion devices (which is ok if you're using the same net freq all the time). Unfortunately, it might cost us some money for this display as the organizers might think we are trying to drum up business (The truth is Adrian or myself have no connection with any QRP company).

I did manage to pick up some brand new 7 amp hour Gel Cells for \$20 Aust. Usually these cost \$40+. Mine is holding its voltage well under load, and looks like a good buy. It will be a good

protable battery for my Sierra, which is on its way from the USA.

Apart from the Battery, I picked up a cheap FM-828, suitable for conversion to 6 meters. For some reason our authorities have decided that all comms equipment must be synthesized, so all crystal lock radios are being taken out of service. For \$15 Aust (or \$10 American) you can buy these radios, which have 25 Watts capability.

I've been think off buying a few more and using the power amplifier transistors to boost the output power of my Sierra to 5W. Some of the MRF type transistors are very expensive here in Australia. Usually, \$60+ for a pair capable of 30 W. I will probably use some sort of frequency synthesizer for the 6m conversion. It appears to be a great mobile frequency and doesn't suffer from the mobile flutter so evident on 70cm and 2m.

One other thing that came to mind was, all these guy in Microwave using <1W. Are they classified as QRP operators or does QRP power levels apply only to HF??

73's from Down Under
Luke

--

Luke Enriquez VK3DLE "I only cook with Non-violent
3rd Year Electronic Engineering fruit that pulps itself."
Latrobe University, Victoria, Australia.
ecslife@lux.latrobe.edu.au

--

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: n9zz@juno.com (Robert A. Schill)
Subject: [2969] Reflectors...
Message-ID: <19961027.191340.5415.1.N9ZZ@juno.com>

I just saw a posting that caught my eye. It indicated that there were reflectors for Ten Tec, and Yaesu, and also Kenwood. Boy I sure would like to get any info on these reflectors if they exist. I would like to add Icom and MFJ to the list if possible.

If there are such things, I would appreciate hearing about them.

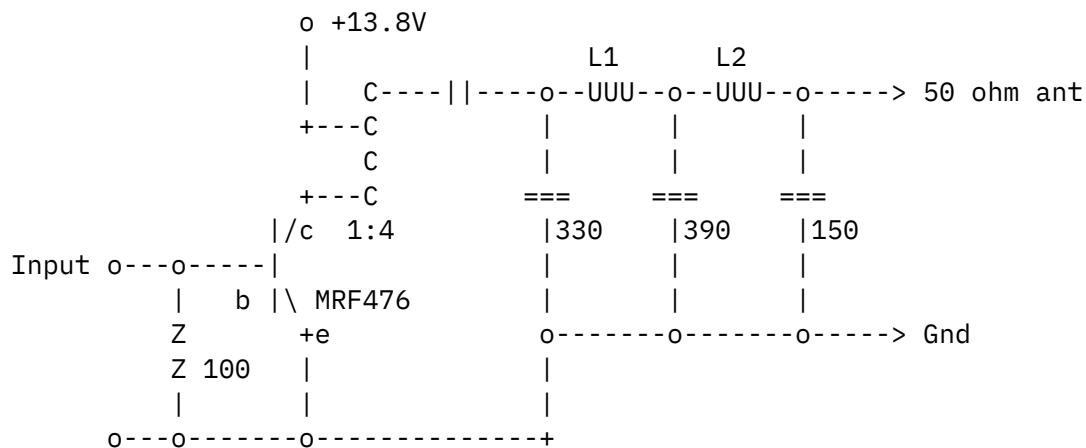
Thanks & 72/73

Bob Schill N9ZZ
Mountain Home, Arkansas
ARCI QRP # 4744, MI QRP #266, AR QRP #1, QRP-L #705, ARS #189
E-Mail address : N9ZZ@juno.com
Packet address: N9ZZ @ N0KFQ.#SWMO.MO.USA

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
 From: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
 Subject: [2987] RF Amp: output network question
 Message-ID: <327426e0.pandora@pandora.lugs.org.sg>

Hi Gang,

As usual, I am confused again! Okay, here's the deal:-



L1 9 turns on a T50-2 = 0.405uH
 L2 11 turns on a T50-2 = 0.605uH

Frequency is 14MHz

First, let's take the filter network and work backwards from the 50 ohm antenna (assume purely resistive for now). The "/" here indicates paralleled so simplify notation.

$$50\text{ohms} // 150\text{pF} = 50 // -75.8j = 34.8 - 23j$$

(34.8 - 23j) in series with L2 (0.605uH) gives:-

$$(34.8 - 23j) + 53.2j = 34.8 + 30.2j$$

$$(34.8 + 30.2j) // 390\text{pF} = (34.8 + 30.2j) // -29.1j$$

$$= 24.4 - 30j$$

(24.4 - 30j) in series with L2 (0.405uH) gives:-

$$(24.4 - 30j) + 35.6j = 24.4 + 5.7j$$

$$(24.4 + 5.7j) // 330pF = (24.4 + 5.7j) // -34.5j$$

$$= 20.4 - 10.4j$$

In other words, this filter is capacitative. Now, transform the resistive part back through the 4:1 transformer and we get 5.1 ohms at the collector. Given that:-

$$P_{out} = (V_{cc} * V_{cc}) / (2 * Z_{out})$$

$$= 13.8^2 / (2 * 5.1) = 18.7 \text{ watts.}$$

Since the class C amplifier is clipping we may assume we are close to this output figure but NO, the actual output is only some 4 watts. What (watt) gives?

73 de 9V1ZV Daniel

--

```
*-----+-----+
| Daniel Wee | daniel@pandora.lugs.org.sg      |
| 9V1ZV      | danwee@singnet.com.sg          |
| QRP-L #667 | daniel.wee@f516.n600.z6.fidonet.org |
+-----+-----+
```

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
 From: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
 Subject: [2953] RF amplifier design
 Message-ID: <32739cd8.pandora@pandora.lugs.org.sg>

Hi,

In my previous post I requested some design gurus here to give us a blow by blow account of how RF amplifiers are designed. I just thought of another way that might work too. This is by doing a detailed analysis of some popular design, say the output stage of the NN1G etc. And THEN, perhaps show us what is entailed when considering modifying it for more power etc.

Alternatively I am also willing to come up with an ASCII diagram of the circuit I've been working on (most of the driver has been posted already anyway).

One reason I am doing all this is that I don't want to just copy blocks from other people's design. I want to know the why's and how's behind the design in case I decide to REALLY brew one from scratch up. I should also

add that I really appreciate the many inputs I have been getting, which has served to clear up a number of points, as well as highlight to me things I never knew were important.

In the course of all this, I am also shooting out by-product questions that crop up as I go along. The latest "effects of flux" is one such example. If anyone objects to my long posts, please just drop me a line.

Now, I am doing all this with a big grin on my face. EVEN when I get tons of posts telling me the same thing. That's right, I am really proud to be a part of this community (although I don't know what the community will think of me by the time I'm through) :-) I must also confess that I am feeling a little guilty in that I am posting my questions about AMPLIFIERS to a QRP group :-) Oh well... there isn't a better place I know to learn these things. So there ...

Once again, a big thank you for all the help so far (which includes all replies, even indications of interest). Keep it coming.

73 de 9V1ZV Daniel

--

```
*-----+-----+
| Daniel Wee | daniel@pandora.lugs.org.sg      |
| 9V1ZV      | danwee@singnet.com.sg                    |
| QRP-L #667 | daniel.wee@f516.n600.z6.fidonet.org      |
+-----+-----+
```

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "J. Skalski" <jskalski@acsu.buffalo.edu>
Subject: [2954] Teflon Coax survey
Message-ID: <Pine.GS0.3.93.961027124842.9759A-100000@autarch.acsu.buffalo.edu>

Hello,

I have had a lot of querries about miniature teflon coax that could be used instead of RG-174. The teflon coax can be soldered without melting the insulation.

I have some of the miniature teflon coax and would like to make it available to the group.

What would be reasonable quantities?
5', 10', 20'

I wonder what the average ham might need to satisfy his building needs.
What are reasonable prices for small lots?

73,

Jim N2GO
The Buffalo QRP CONNECTION
ARCI #9013 QRP-L #381
jskalski@acsu.Buffalo.EDU

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: n3wxi@sgi.net
Subject: [2973] Tree Fishin'-results
Message-ID: <199610280059.TAA01268@orion.bv.sgi.net>

Hi gang. Today (10-27-96) I put up my first outdoor antenna. I decided on a 135' inverted vee fed with ladder (window?) line per the latest handbook. This is supposed to be a great antenna to work all the HF bands.
Some comments:

- 1) The slingshot/fishing sinker thing works GREAT!
 - 1b) This is the last easy thing about this installation.
- 2) Trees have LOTS of branches, ALL of which will interfere with some part of the antenna structure.
- 3) It's truly amazing how badly all that wire can get tangled in things.
- 4) All those bushes in the woods behind your house have thorns on them.
ALL OF THEM.
- 5) I bought some romex on sale at the local Home Depot (xyl calls it testosterone city) and cut it open to get the wire for the antenna. DO NOT try this if you value your sanity.
- 6) The folks who recommend this antenna either a) own half a state or b) have never actually tried this. I ended up zigzagging this thing all over the back yard to get it to fit. I think I'll call it an inverted maze antenna.
- 7) Do not run ladder line near metal objects. I think this is actually some sort of sick initiation stunt to see if any of us are actually stupid enough to try to accomplish this. Picture aluminum siding, metal duct work, copper plumbing, you get the idea. The only way I could do this would be to

cut away several square feet of siding, run it through the dining room, living room, and spare bed room at about chest height.

- 8) One good thing. I used the black wire and painted the rope flat black and this thing is nearly invisible. Bad thing. All the neighbors know it's there anyway due to the shouting and cursing from my back yard today.
- 9) 100' of ladder line was too short to make it into the house. Will have to visit the ham store this week before I can try this thing out. PLEASE, SOMEONE TELL ME THIS IS GOING TO BE BETTER THAN MY ATTIC DIPOLE!
- 10) Finally, antennas are truly a curse on mankind. Those of you who LIKE to experiment with antennas are SICK, SICK, SICK. Seek professional help and do it soon. Hate to think of all you sickos running around with lethal weapons (slingshots).

72 George (N3WXI) QRP-L #440

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "L. B. Cebik" <cebik@utkux.utcc.utk.edu>
Subject: [2945] VXOs
Message-ID: <Pine.SOL.3.94.961027055215.17229A-100000@utkux4.utcc.utk.edu>

>From time to time VXO techniques have been discussed by this group. So I thought I'd pass along some interesting experimental results of W4LQE, Bob, who lives in this area, is a member of QRP ARCI, but who is not on e-mail.

He has been experimenting with 24-25 MHz fundamental (NOT overtone) xtals and achieved up to 40 kHz stable swings. He uses the same basic techniques as with lower frequency VXOs (both L and C in the swing line), but so far with surplus/flea market/etc. xtals has had to adjust the L values for each xtal. He has also doubled the xtal frequency to the 48-40 MHz range for 80 kHz stable range, and then mixed the frequency with 602s down to the ham band of interest. Mixing products, of course, become a nonproblem.

Makes me wonder what results might be obtained with unit-to-unit reliable xtals. With 80 kHz, rather than the 40 kHz typical of varacter 2 MHz VFOs, more band might be available, and IF everything remained stable with tripling and mixing downward, both the general and novice QRP frequencies would be accessible on 40. Bob reports the VXOs fit on postage stamp

boards using "ugly" construction, so size increase using his system seems minimal.

I have asked Bob to write up his results so far and send them to QQ, to which he subscribes. In the meantime, I thought I'd pass along these quick notes, especially for the VXO experimenters. Remember that something may well have been lost or distorted in my translation of our 10 meter conversation last Thursday, but most VXO experimenters can likely set things right.

-73-

LB, W4RNL

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: J^rgen J^nsson <jorgenj@uddeholm.se>
Subject: [2943] Where to find HAMCAD on internet
Message-ID: <96Oct27.094803gmt+0100.36865@wall.uddeholm.se>

pse send me <mailto:jorgenj@uddeholm.se>

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: PDouglas12@aol.com
Subject: [2977] White Mountain: Group 4 progress
Message-ID: <961027210640_133381152@emout17.mail.aol.com>

Hi Gang,

My White Mountain SSB rig plays sweet music tonight. Lots of nice SSB sigs on the band, and it holds the signals very nicely, thank you. Hot damn. Hey Dave, nice rig!

Usual trials and tribulations with group 3. Main problem was a bad brand new jumper cord (alligator job) so I wasn't getting (-) power into the board.

Elementary dear Watson? Well this idiot uses the battery ground instead of board ground, so it took two hours of deep trouble shooting to discover no power on the board. If it "don't work" check that it's plugged in. Uh huh.

Also found a trimmer with a short, so the vfo runs, but only when the trimmer is in 1/4 of its circumference. An easy fix. Undoubtedly due to the way I stuff a board. Ever see that add with the gorillas and the Samsonite

luggage? You get the picture.

Started group 4 this afternoon. Pleased to report no problems.

Anyway, notwithstanding the low local IQ, the rest of the receiver went together just fine. At the end of group 4, Dave says in the instructions to try out the radio. If it plays, then go get a cool one. It plays. Cool one coming up, and the iron is cooling down for the night.

Oh, and it play nicely too. Tuning in a voice with the 10 turn pot is smooth and easy. And the stability seems to be there. Drives a speaker ok, and voice quality is very clean. Now for the transmitter rest of the week.

And the KC2 is on order, so I hope to see it just in time for completion of the rig itself.

See ya'

Preston WJ2V

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996

From: "Dean Marzocca" <n2tnn@ifu.net>

Subject: [2970] Re: "black widow" rod source for St. Louis vertical

Message-ID: <199610280018.TAA18439@mail.ifu.net>

Matt,

Tnx for the info. Made the call, got the goods, twisted the twin lead on, soldered the radials and pulled up the radiator. Looks like a field test tomorrow.

Really looks slick...

72/73, Dean, NJ, N2TNN, QRP-L # 560

EMPS Q=4 S=3 DX=1

> From: Matthew Trail <mtt6@cornell.edu>

> To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>

> Subject: "black widow" rod source for St. Louis vertical

> Date: Wednesday, October 09, 1996 9:41 AM

>

> Hi, gang

> Cabela's Outfitters' (spring/summer) catalog lists the 20 foot

> telescoping "black widow" rod for \$20.48. Item number is (or was in that

> catalog) AG-11-00503. Cabela's number is 1-800-237-4444.

> Good "fishing"!

>

>

Matt AA2ZD

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: wb2vuo@juno.com (William K Hibbert)
Subject: [2972] RE: Call CQ when the band is dead
Message-ID: <19961027.192251.4727.0.wb2vuo@juno.com>

One of the adages in the "VHF Manual" is that "all the receivers in the world won't be heard on the band..." and the "CQ on the 'Dead' band..." raises someone more times than not.

This is a true fact on VHF, and on HF bands, too. This is WHY beacons have a place. I have received phone calls about my (the club's) 10 meter beacon being the "only signal on the band..." and have gone on the air & worked the party calling me. If I hear a beacon, out of my local area, I call "CQ". You can get an idea of what's open to where by listening to the beacons (if present) or users on adjacent frequencies. For 80 & 40 Meters, CHU on 3330 KHz and 7335 KHz or broadcasters in the 59, 49 and 41 Meter bands can be used. As you move up the bands, get accustomed to what is normally heard, and when something not normally heard is there, you can spot it more quickly.

I almost hate to mention it, due to the inevitable Flames that are generated by the Knee-jerk reaction to CB, BUT... With the level of activity, on the 11 and the 10 1/2 Meter "bands", openings can be spotted almost immediately. The biggest problem is determining the location of the CB'er you hear, but if they are calling for DX, (Skip-land, or equivalent), they usually shout their location loudly and frequently. Don't assume that the skip you hear is running QRP (4 watts AM) as there are amps available from 25 - 1500 watts for the 11 Meter band almost anywhere. They usually get marketed as "Amateur" amps, despite the band on such marketing, and are mostly junk, sold at \$2 - \$3/watt out.

For the "Top-band", the top of the BC band is a good source for "beacons"... The station in NNJ on 1660 KHz (WJZR ???) is a good beacon, and is the ONLY thing on the frequency at this time...

Lacking any other signs, call anyway. The band is "open" to somewhere, even if just across the town/county/state. DX is in the eye of the beholder. DX means "distance", not "long distances". Work your locals as the 'noise' generated may attract some "real DX".

72/73, Keith, WB2VUO, QRP-L #582
Trustee, KB2YTW/B 10 Mtr Milliwatting Beacon (250 mW @ 28.2870 MHz)
"In the Depths of the Great Bergen Swamp...FN13ac"

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "Kelly Ellison" <kelman@dialnet.net>
Subject: [2976] Re: Call CQ when the band is dead
Message-ID: <199610280257.UAA25733@shell.dialnet.net>

Hello All,
With all this talk about calling CQ on a dead band, I would like to echo a plea for a Ten Meter Propagation Study. The Late Winter, Spring and Early Summer would probably be the Best time of year. I know that Ten Meters is a favorite of many hams. And of course Ten Meters is a natural for QRPers.

Just a thought...

Let the Flames Begin!

By the way, I am still looking for a used S&S Engineering TAC-1 for 40 meters or an Argosy. Thank you.

Kelly Ellison
WB0WQS
Aurora, Missouri
kelman@dialnet.net

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "Dana H. Myers" <myers@bigboy.West.Sun.COM>
Subject: [2984] Re: Call CQ when the band is dead
Message-ID: <Roam.3.0.1.846471497.8409.myers@bigboy>

Kelly, WB0WQS, wrote:

> Hello All,
> With all this talk about calling CQ on a dead band, I would like to echo a
> plea for a Ten Meter
> Propagation Study. The Late Winter, Spring and Early Summer would probably
> be the
> Best time of year. I know that Ten Meters is a favorite of many hams. And

> of course Ten Meters
> is a natural for QRPers.

This reminds of the time that I was tuning around 10m early one evening (back then, the only HF antenna I had up was an AR-10) in October. 10m sounded "in" - the noise floor was up a little - and I could hear a couple of CB pirates at 28.045MHz. I tuned around the beacons and didn't hear any. Hmmm. I figured I'd just call a very long CQ for giggles, so I tuned 1KHz below the pirates and started calling CQ. I called CQ for several minutes, leaving short pauses but not really expecting anyone to come back (particularly since I was not in the Novice segment). I nearly fell out of my chair when T32BE came back from Christmas Island! Paul and I had a nice chat, he was just setting up and was tuning around while checking out antennas. We had a very pleasant ragchew and I got a QSL card that my DX hound friends actually appreciate. Next time I heard T32BE it was in a pileup on another band - heh heh.

Those that have heard/read the story before, please forgive me ;-)

Dana KK6JQ
Dana@Source.Net

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "marcus (m.c.) leatham" <leatham@nortel.ca>
Subject: [2963] Re: Female Hams
Message-ID: <"10079 Sun Oct 27 14:01:48 1996"@bnr.ca>

I got your attention with the last post, did I not?

I think the best way to keep prejudice alive is to continue talking about it. Hence, the "Die subject, die" post.

I think the best post on this subject (since we are talking about it - briefly, I hope) was the person who said that they enjoyed operating CW because it was impossible to tell anything about the person on the other end of the QS0. I like that part of CW, too. I could read posts like that all day.

I think both sides of a prejudice situation have a responsibility to work to make it better.

No apologies from me, none required from you.

Let's continue to express our feelings and opinions freely.

Marcus.

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Monte Stark <ku7y@sage.dri.edu>
Subject: [2958] Re: Help: Temp Controlled Soldering Iron
Message-ID: <Pine.SUN.3.90.961027104300.5130D-100000@vortex.sage.dri.edu>

On Sun, 27 Oct 1996, Bill Jones wrote:

> GC Electronics "Supertemp" soldering station model 12-070.

Hi Bill,

I have had and used one of these for about 12 years. I really like it.

I did break one heating element once and had to replace the whole part that you hold in your hand, cord and all.

I would suggest checking with an ohm meter to see if there is a break in that part.

Other than that, I don't have much to offer!

cul,

73, Ron,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....
....ku7y@sage.dri.edu.....Washoe Lake, Nevada....
....QRP-L #17...ARS #49...NorCal #330.....NRA LIFE.....

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: ka7you@juno.com
Subject: [2944] Re: Intro and question
Message-ID: <19961027.015907.2919.6.KA7YOU@juno.com>

John KF4MTS,

Welcome to the group! It is a bit of a surprise, and a good sign I think, to see your grid square listed with your name so early on! Are you planning to become active in VHF SSB and CW weak signal operation?

What town do you live near? Let the list know-there are plenty of people who are much nearer but are willing to help if you need assistance, and many more willing to give advice-good or bad!

What got you into amateur radio? What kind of work do you do etc.? What are your plans for the next year or so, relating to amateur radio? Do you belong to a club?

Tell us more!

Rod Johnson KA7YOU CN97AK (near Seattle)

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "marcus (m.c.) leatham" <leatham@nortel.ca>
Subject: [2964] RE: matching questions
Message-ID: <"24509 Sun Oct 27 15:03:09 1996"@bnr.ca>

Well, you don't want to drive with square waves, because the class C stage relies upon a small conduction angle (about 10 degrees out of the 360 degree cycle) to achieve high efficiency. Also, if the class C stage is used as a frequency multiplier, a square wave drive will be completely inappropriate.

Regards,
Marcus KR5N

In message "RE: matching questions", 'denton@cyber-west.com' writes:

>In a class C final, distortion of the drive signal is normal. The emitter base
>junction is not going to allow more than about .7 volt drop across itself, so
>it sort of "zeners" the tops off your sine waves. Actually, for class C, you
>might as well drive with square waves.

>
>Denton
>K7OWJ
>
>

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "marcus (m.c.) leatham" <leatham@nortel.ca>
Subject: [2965] RE: matching questions
Message-ID: <"24751 Sun Oct 27 15:04:13 1996"@bnr.ca>

Actually, the forward biased E-B junction of the transistor ALWAYS has about a .7 volt drop, even if the transistor is operating in the linear region.

The circuit impedance and current flow through the collector is what determines if a transistor is in cutoff or saturation. In a linear stage, don't look at the drive signal right at the base, go back on the other side of an input resistor, or else look at the voltage on the high side of an emitter resistor if there is one. As the previous post says, the .7 V will appear to limit ("zener") the input signal at the base of the transistor.

Sorry I took two posts to get it all together...

Marcus.

> Well, you don't want to drive with square waves,
> because the class C stage relies upon a small conduction
> angle (about 10 degrees out of the 360 degree cycle) to
> achieve high efficiency. Also, if the class C stage is
> used as a frequency multiplier, a square wave drive will be
> completely inappropriate.

>
> Regards,
> Marcus KR5N
>

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>In a class C final, distortion of the drive signal is normal. The emitter base
>junction is not going to allow more than about .7 volt drop across itself, so
>it sort of "zeners" the tops off your sine waves. Actually, for class C, you
>might as well drive with square waves.

>
>Denton
>K7OWJ
>
>

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: svecbrdk@well.com (L.Svec,W.Burdick)
Subject: [2942] re: MXM Emergenceiver, SST
Message-ID: <199610270702.AAA02519@mh1.well.com>

Chuck, enjoyed your posting on the Emergenceiver. Sounds like the most salient difference between it and the SST is that the latter has a VFO for both transmit and receive, and of course the Emergenceiver is a bit smaller

and less expensive with case. Hope you'll put them side by side at some point and give us your detailed comparison.

One small clarification on the SST. It will actually be two kits--one with parts and PC board only that will be well under \$50 (probably closer to \$40), and the other kit containing the controls, connectors, and case ("CCC"), also well under \$50.

The case is a custom, 3.3"Wx1.3"Hx3.8"D, and there's no wiring, as with the '40A and Sierra. Top and bottom come off with 4 screws so you can work on both sides of the SST PC board "live" without unwiring anything. The CCC kit is of course optional since many builders will want to use their own box.

73,
Wayne

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Kevin Bunin <p014455b@pbfree.net.seflin.lib.fl.us>
Subject: [2971] Re: N4BP/VP9 QRP ARCI Fall QSO Party
Message-ID: <Pine.3.89.9610271901.A6779-0100000@pbfree.net.seflin.lib.fl.us>

Great outing, Bob. I am only sorry I was not able to work you that weekend. I was up in Orlando the 24/25 for a business conference and did not arrive home until today, 10/27 at 6 pm.....

Talk to you soon. and 73
de KB WV5Z

p.s. I know the vertical from whence you speak! It is ugly, but works great!

Kevin Bunin
p014455b@pbfree.net.seflin.lib.fl.us

On Fri, 25 Oct 1996, Bob Patten wrote:

> 1996 QRP ARCI CONTEST
>

> Call used: N4BP/VP9 Location: VP9
> Category: Single Op High Band Mode: CW Power: 5W
> Callsign of Operator: N4BP
> Exchanged Information: N4BP/VP9 RST VP9 3412
> Hours of Operation: 14:16
>

band	QSOs	points	mults
====	=====	=====	
20	263	7070	74
15	10	315	9
====	=====	=====	
TOTAL	273	7385	83

SCORE: 612,955

> Comments: TS-430S, 4 band trapped vertical
>

> I arrived in Bermuda on Wednesday afternoon, October 16. Before the Radio
> Society of Bermuda's banquet at 7PM, I managed to get the station set up
> at my Palmetto Bay Hotel cottage and made three QSO's on 20 meters. The
> first was California and the second England; these were replies to my
> CQ's and seemed very encouraging in that conditions might be decent for my
> visit.
>

> During Thursday and Friday, I intended running at the 100 watt
> level which I did for 170 Q's on 20m. But on Friday during a respectable
> run on 10m (mostly New England), the rig smoked and the power dropped to
> the QRP level. For a while, it intermittantly jumped back and forth from
> 100w to 5w, but finally could muster no more than 5w. The propagation was
> good on 10m however, and the run continued until I finally decided to give
> it up and see some of the island on the scooter provided to me by VP9ID.
> The final tally from my "casual" operating on Thursday and Friday was:
>

band	cw QSOs	ssb QSOs
====	=====	=====
40	28	0
20	170	22
15	17	0
10	0	105
====	=====	=====
TOTAL	215	127

342 Q's

> On Saturday at 1200Z, I began operation in the QRP A.R.C.I. Fall
> QSO Party. For the first couple of hours, the European QSOs far
> outnumbered the U.S. contacts. I suppose this was because I was in the
> Atlantic time zone and had an earlier sunrise than the states. The
> weather all day Saturday was horrible with heavy rains and high winds. I
> felt fortunate since I planned to be indoors anyhow, and the bands still
> sounded reasonably quiet. Fifteen and ten were a bust. Fifteen only
> produced 10 Q's and ten provided none. Since I was to have a busy day

> Sunday with the return flight and then had to work overnight Sunday, I
> decided to forego forty meters and get some sleep. An even wiser choice
> would have been to enter single band on twenty meters instead of high
> band.

> Some notes on the antenna. Almost thirty years ago, I was given a
> scrap Hy-Gain beam (a DB- something or other) as a bonus when I bought a
> Heathkit Apache linear amp from a co-worker. I salvaged the traps and
> some pieces of aluminum to construct a four band vertical. For forty
> meters, I use a Hustler mobile resonator. This ugly antenna has been on
> many Field Days in the Florida Keys, to Cape Cod, San Francisco, the
> Bahamas, Cayman Islands, and now to Bermuda. Prior to this trip, I used a
> hacksaw to reduce the antenna to pieces no longer than 18 inches so that I
> could fit it in a suitcase. With an engraving tool, I numbered the
> sections so that I could easily reassemble it. I also brought eight
> pre-cut radials, two for each of the four bands. Near the end of the
> party, VE3VA commented to me that my signal was as strong as from home.
> This didn't surprise me as I've seen this phenomenon before. When using
> this vertical from the Keys, it is also set up by the water at ground
> level and outperforms my 45 foot high tri-band beam at home.

>
> My entire station fit into one carry-on suitcase, but was
> incredibly heavy. This proved to be a major problem in navigating the
> Atlanta airport for connecting flights going to and returning from
> Bermuda. But all the equipment survived, even after the puff of smoke
> from the TS-430S on Friday. The Radio Society of Bermuda treated me
> royally! Glenn, VP9ID made most of the arrangements including the loan of
> one of his scooters to tour the island. Mike, VP9KK and his twin brother
> Manny took me to and from the banquet and general meeting, and Larry,
> VP9MZ ran me to the airport for the return trip. All in all, a memorable
> trip thanks to the Radio Society, the Bermuda Department of Tourism, and the
> people of Bermuda. I hope to return again at a future date.

>
> Bob Patten, N4BP

>
>
>

From owner-qrp-1@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "Chuck (Jack) Hawley" <c-hawley@uiuc.edu>
Subject: [2981] Re: need cross ref. of diode.....
Message-ID: <32741C79.FE3@uiuc.edu>

Phil, AC6LS wrote:

>
> Trying to put together some stuff here from scratch per someone
> elses schematics. Calls for a Motorola HPA-2800 hot carrier diode

> or equiv. Cant find any ref. to this part in any of the catalogs
> I have. I know someone has the answer (specs or cross ref).
>
> Thanks, 72 de Phil

HP's full number is 5082-2800 and it is the same as a 1N5711. You should be able to find that most places.

>From the HP data book:
Min breakdown = 70
Max forward voltage VF = 410mv
Rev leakage at VR = 50volts IR = 200na
VF = 1volt MAX at forward current of 15ma
Max capacitance CT = 2pf

Chuck, KE9UW

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: "J. Skalski" <jskalski@acsu.buffalo.edu>
Subject: [2986] Re: need cross ref. of diode.....
Message-ID: <Pine.GS0.3.93.961027223517.5745C-100000@autarch.acsu.buffalo.edu>

The 1n5711 is available from surplus sales of Nebraska for about 1.50 each or from Debco for 35 cents.

73,

Jim N2GO
The Buffalo QRP CONNECTION
ARCI #9013 QRP-L #381
jskalski@acsu.Buffalo.EDU

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: svecbrdk@well.com (L.Svec,W.Burdick)
Subject: [2982] Re: QLOG (QRP mini-log & reference)
Message-ID: <199610280244.SAA14396@mh1.well.com>

>Wayne,
> What is going on with the log books?

| 9V1ZV | danwee@singnet.com.sg |
| QRP-L #667 | daniel.wee@f516.n600.z6.fidonet.org |
+-----+-----+

From owner-qrp-l@Lehigh.EDU Sun Oct 27 23:11:36 1996
From: Monte Stark <ku7y@sage.dri.edu>
Subject: [2960] Re: Soldering irons
Message-ID: <Pine.SUN.3.90.961027104942.5130F-100000@vortex.sage.dri.edu>

Hi All,

One little tip:

A few years ago at work, I had the electrician do a couple of things for me.

1) All the plug strips that I use for things like soldering irons, equipment under test and other items that don't have osc's that need to stay on, were wired to a switch. When I leave for the day, I turn that switch off.

If I have forgotten to unplug or shut off something, it doesn't matter because it gets turned off when I turn the master switch off.

2) Wire some 4plex outlet boxes that are always on for things like the service monitor that want to stay warm.

You can do the same thing at home using a plug-in strip that has a switch. Just always turn that switch off when you leave. If you also run your overhead light from that strip, it's hard to forget!

cul,

73, Ron,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....
....ku7y@sage.dri.edu.....Washoe Lake, Nevada.....
....QRP-L #17...ARS #49...NorCal #330.....NRA LIFE.....